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SUBJECT: Realizing Mao's Vision of Water for the North in Time for the Olympics

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SUMMARY

¶1. (U) With the start of the Beijing Olympics set for August 8, Northern China's water shortage has received widespread attention in both local and international press, with accounts of what the Chinese government has done in recent years to address the problem. Instead of addressing the water shortage of northern China at the source of the problem, the government decided in 2002 to back an engineering project larger in scale than even that of the Three Gorges Dam: The South-North Water Diversion Project. Numerous problems have arisen in constructing this project. The Central and Eastern Routes have funding and pollution problems. As for the Western Route, the costs and risks exceed the likely benefits and the route has been suspended indefinitely. If the Chinese government wants to solve the ever deepening water crisis, demand management practices such as water conservation and improved agricultural practices need to be pursued rather than a costly water diversion solution. END SUMMARY.

BACKGROUND

¶2. (U) Mao Zedong himself first conceived of the idea for transferring water from southern China to northern China and, in the 1950s, the Yellow River Committee (YRC) began initial planning. While over 300 plans have been proposed, only three were eventually selected by the YRC for development. The three plans combined now comprise the project known as the South-North Water Diversion Project (SNWD). An Eastern Route will divert water from the Yangtze River into the Grand Canal at Jiangdu City in Jiangsu Province and then cross the Yellow River via tunnel and flow to Tianjin. The Central Route uses the Danjiangkou Reservoir in Hubei Province as its source. Using a series of canals, the water will be diverted through Hebei and Henan to supply Beijing. The Western Route calls for diverting water from the Dadu, Tongtian, and Yalong rivers, tributaries of the Yangtze River, across the Qinghai-Tibet Plateau and through the Bayankala Mountains. The water would then be diverted into the Yellow River to replenish the water stocks already flowing eastward to supply Beijing and Tianjin.

CENTRAL AND EASTERN ROUTES PROCEEDING SLOWLY

¶3. (U) On June 13, 2008, ESTH officers met with officials and

engineers from the Office of the SNWD Project Commission to discuss the current status of SNWD. (NOTE: The SNWD Project Commission reports directly to the State Council. END NOTE) The officials stated that the construction of the Eastern and Central Routes is proceeding smoothly, and that the government is maintaining both construction safety and quality standards during the process. As of the date of the meeting, about 60% of the Eastern Route projects had been completed; however, there is no definite timing for the completion of the Central and Eastern Routes. The SNWD Commission officials said they are currently awaiting the State Council's approval of recently-submitted General Feasibility Study Reports for each of the routes before they can proceed.

¶4. (SBU) Yang Yong, an independent researcher with the Hengduan Mountain Society, a Chengdu-based NGO, told ESTH officers recently that the Central and Eastern Routes have had funding problems due to local governments along the routes being unwilling to contribute resources to the water diversion project. According to SNWD interlocutors, local officials' unwillingness is caused by the uncertainty of compensation for ecological damage and the ability of provinces along the route to enjoy the benefits of an equitable water distribution and pricing policy upon completion of the project. For example, the Central Route goes through Hebei Province, but it is unlikely that water will be provided to Hebei, thereby offering little incentive for Hebei to help fund the project. In addition, according to press reports, the government has ordered farmers to plant cops that consume less water and produce les income, such as wheat and corn in place of rice and vegetables, instead of allowing them to tap the new waterways. (COMMENT: When the rural population is left impoverished and without ater while Beijing benefits from a costly waer project, it's no wonder there is no suppor from local governments. END COMMENT)

POLLUTION AND SALTWATER INTRUSION HAMPER EASTERN ROUTE

¶5. (U) Water pollution is a significant concern along the Eastern Route, which runs through highly industrial areas of Jiangsu Province. The budget for construction of the Eastern Route is said to be 100 billion RMB (14.6 billion USD); whereas its pollution control cost is estimated to be 600 billion RMB (87.6 billion USD). Pollution control measures in the process of being implemented include building urban sewage plants, using recycled water, and adjusting industrial practices. The Office of the SNWD Project Commission told ESTH officers they are confident the construction will eventually lead to an improvement in water quality along the Eastern Route. (COMMENT: Unless measures to curb pollution at the source also are properly implemented, no amount of controls along the route will significantly improve the quality of the water being diverted. END COMMENT)

¶6. (U) The diversion of the Yangtze River as part of the Eastern Route may also cause salt water to contaminate the Yangtze Estuary at Shanghai, where the river meets the ocean. To prevent this, the project plans for less water to be pumped during the dry season from December to February. By diverting less water from the Yangtze, the Yangtze's water level will be high enough to prevent the ocean's salt water from flowing into the river.

OBSTACLES ALONG THE CENTRAL ROUTE

¶7. (U) The Central Route's main problem is insufficient water resources at the intended source. A recent report on the SNWD states that the Danjiangkou Reservoir in Hubei Province, the water source for the Central Route, can now only divert an estimated 9.7 billion cubic meters of water, which is lower than the original plan of 14 billion cubic meters.

¶8. (U) Pollution is not as serious of a concern for the Central Route; however, to prevent any new pollution as the water is transported along the route, a Danjiangkou Pollution Prevention and Water/Soil Conservancy Project has been initiated. The project intends to maintain Danjiangkou Reservoir's water quality at a

standard of at least Class II (on China's five-level water quality scale, with I being best and V being the worst).

WESTERN ROUTE OVER BUDGET AND STALLED

¶9. (U) The Western Route is currently still in a feasibility study and project proposal stage. According to the original plan devised in 2002, inauguration of the Western Route was set for 2010; however, this estimate has been postponed indefinitely. According to Yong, in 2007 members of the National People's Congress raised concerns about potential geological complications in the Hengduan Mountain area and the availability of water resources in Qinghai, the proposed water source. The report prompted the Ministry of Water Resources (MWR) to call for postponement of the current work on the Western Route. The current cost estimate for the Western Route is 500 billion RMB (73 billion USD). This is almost double the amount budgeted in 2000 of 300 billion RMB (43.8 billion USD).

SEISMICITY MAKES WESTERN ROUTE UNREALISTIC

¶10. (U) It is widely accepted that earthquakes in the Hengduan Mountain Region in Sichuan Province pose a significant risk to the Western Route. Yang noted that after the Sichuan earthquake on May 12, 2008, many of the existing dams and those under construction in the Hengduan Mountain region were damaged, despite officials' claims that the Sichuan earthquake did not directly affect structures within the SNWD project. Yang believes that due to the proximity of the Western Route to the earthquake prone region, another earthquake could cause substantial damage to the Western Route if development continues. The total water diversion volume for the project is expected to be about 45 billion cubic meters per year. With such quantities of water being shifted, changes in pressure on the bedrock below can result in induced seismicity. Yang said that several geologists around the world believe the Zipingpu Dam may have triggered the Sichuan earthquake in May; this suspicion is due to the close proximity of the earthquake's epicenter to the dam's reservoir, a distance of five kilometers. In addition to seismic activity, there is also potential for flooding. Most of the reservoirs along the Yellow River are small and insufficient for

handling the increase in reservoir storage capacity needed during flood season. If heavy rains cause the flow of the Yellow River to increase beyond available reservoir storage capacities during flood season, there will be an increased risk for widespread flooding.

¶11. (U) Yang noted that along the Western Route, pollution does not pose a major concern because there is not much industry along the route. What is of greatest concern is the mineral content of the water; for example, mercury levels currently exceed standards deemed safe for human consumption.

AN ALTERNATIVE TO THE WESTERN ROUTE

¶12. (SBU) With the Western Route now suspended indefinitely, Yang Yong described to ESTH officers an idea for an alternative water source for the Western Route. The alternative source would be water from melting glaciers in the Kunlun and Qilian Mountains, on the border between Qinghai and Gansu Provinces. The volume of water from the melting glaciers is estimated to be 25 billion cubic meters per year, or 36 billion cubic meters per year total including melting snow. (NOTE: Both these volumes are larger than the Western Route's total planned water diversion volume of one billion cubic meters per year. END NOTE) Currently, only ten percent of this water is being collected and used, with the rest seeping into the desert or evaporating in southern Xinjiang. In addition, scientific reports show that there is ground water in the Taklimakan Desert south of the Tarim Basin. These water sources are currently being explored to determine suitability for supplying local populations. Yang stated that scientists from the Institute of Ecology and Geography working in southern Xinjiang are quite familiar with the melting glacier and ground water resources, but their input is rarely sought or adopted by SNWD officials nor by the Yellow River

Commission, which historically has been protective over its control of the SNWD.

CULTURAL SITES

¶13. (SBU) In addition to environmental issues, the construction of the SNWD project also has social impacts. While over 700 cultural heritage sites will be affected by the SNWD project, only 50 million RMB has been approved to protect 45 sites along the Central and Eastern Routes. As for the Western Route, since Tibetans consider the Qinghai-Tibet Plateau to be a holy land, and any alteration of the mountains, lakes, and natural environment is strictly forbidden by Tibetan Buddhism, its construction could lead to conflict with the indigenous population.

EMERGENCY WATER LINE FOR THE OLYMPICS

¶14. (U) Five hundred thousand additional visitors are expected in Beijing for the August 2008 Olympics. Since none of the main SNWD routes will be completed in time for the Olympics, the potential for water shortages is being addressed with the construction of a short-term emergency line from four reservoirs (Wangkuai, Xidayang, Gangnan, and Huangbizhuang) in Hebei Province to Beijing, which has already been completed and performance tested. A test operation was scheduled for June 24, 2008. Although results of this test have not been officially reported, the emergency line is not currently in use and reportedly will be tapped only when normal supplies become insufficient. According to press reports, Guangting and Miyun, Beijing's two largest reservoirs, currently store more than one billion cubic meters of water. Officials estimate that Beijing will need 200 to 300 million cubic meters of water for visitors during the Olympics. (COMMENT: Because of water from recent rains, Beijing will not likely experience a water shortage during the two week-long games, nor will there be a need to bring the emergency line into action. END COMMENT)

COMMENT

¶15. (SBU) If Beijing does not implement more stringent water conservation methods to address excess demand, no amount of diverted water will prevent the northern region's impending water crisis. Instead of simply relying on an increased water supply, the Chinese government needs to improve demand management across all sectors that consume water by promoting more efficient agriculture irrigation systems and less wasteful industrial water use practices

through price reforms. While the Eastern and Central Routes might ultimately serve their intended purpose, should China decide to continue pursing the Western Route, the project could lead to an irreversible drain on government funds with ever-increasing costs on top of an already staggering price tag. Despite assertions that the May earthquake did not affect the central government's financial support for the SNWD, it is difficult to believe that the budget will not at least be trimmed, given that official expenditures are being cut at all levels, and that local and provincial governments are increasingly being ordered to contribute to the earthquake reconstruction cause. Finally, in the unlikely event that the project is completed in its entirety by its original deadline of 2050, the water crisis may have intensified to such a point that the amount of water the project is able to supply will have already become insufficient, making it necessary to find an entirely new solution.

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